

## REMARKS

These amendments and remarks are being filed in response to the Office Action dated June 8, 2004. For the following reasons this application should be allowed and the case passed to issue.

No new matter is introduced by this amendment. New claims 20-25 read on the elected species. The amendment to claim 10 is supported by the specification at page 6, lines 14-16. New claims 20, 22, and 23 are supported by the specification at page 5, lines 5-10. Support for new claim 21 is found in claim 1. Claim 4 supports new claim 24 and new claim 25 is supported by the specification at page 6, lines 14-16.

Claims 1-25 are pending in this application. Claims 5-9 and 11-19 have been withdrawn from consideration pursuant to a restriction requirement. Claims 1-4 and 10 are rejected. Claims 20-25 are newly added. Claim 10 has been amended in this response.

### *Claim Rejections Under 35 U.S.C. § 112*

Claim 10 was rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description. The Examiner alleged that specification does not adequately disclose how the melting point of the coating is lower than the melting point of the first part.

Claim 10 was rejected under 35 U.S.C. § 112, second paragraph, as being indefinite because the specification does not adequately disclose how the melting point of the coating is lower than the melting point of the first part.

These rejections are traversed, and reconsideration and withdrawal thereof is respectfully requested.

Claim 10 has been amended to require that the melting point of the coating is lower than the melting point of the second part. Applicants submit that claim 10 fully comports with the requirements of 35 U.S.C. § 112.

***Claim Rejections Under 35 U.S.C. § 102***

Claims 1-4 and 10 were rejected under 35 U.S.C. 102(b) as being anticipated by Kasugai et al. (U.S. Patent No. 5,104,472).

Claims 1-4 and 10 were rejected under 35 U.S.C. 102(b) as being anticipated by Prince (U.S. Patent No. 6,189,744).

Claims 1-4 were rejected under 35 U.S.C. 102(e) as being anticipated by Pachciarz et al. (U.S. Patent Application No. 2001/0042752).

These rejections are traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the instant invention as claimed, and the cited prior art.

An aspect of the present invention, per claim 1, is an insert mold structure comprising a first part constituted from a thermoplastic material. A second part, coated with a paint made from the same material as the first part, is insert-molded into the first part.

The Examiner asserted that Kasugai et al., Prince, and Pachciarz et al. disclose the claimed structure.

A “coating” is a film formed by any material that will form a continuous film over a surface (*McGraw-Hill Dictionary of Scientific and Technical Terms*, 5th ed., p. 394, attached). The term “insert-mold” means to unite a first element with a second element by forming the first element with

the second element inserted therein in a proper mold. Insert-molding is described in the specification at the last line of page 4 to line 10 of page 5. During insert-molding, the first part tightly adheres to a peripheral surface of the second part so as not to leave a gap. Subsequently, the coating is partly fused with the first part and forms an adhesive layer while the first and second part are insert-molded. The adhesion layer provides a gas-tight and liquid-tight adhesion between the first part and the second part.

Contrary to the assertions of the Examiner, the claimed “paint made of the same material as the first part” combined with the claimed “second part insert-molded in the first part” are structural limitations. Further, they are structural limitations, not disclosed by Kasugai et al., Prince, and Pachciarz et al. Therefore, Kasugai et al., Prince, and Pachciarz et al. do not anticipate the claimed insert mold structure.

Kasugai et al. does not disclose or suggest a coating on the central tube and is silent about material limitations of the parison P. Though the Examiner considered the filler 15 and base portion 23 as the coating, they are distinguishable from the coating required by the instant claims. The filler 15 and base portion 23 of Kasugai could not form a continuous film on the central tube 21. In addition, the Examiner maintains that the recited paint limitation in the instant claims does not require any structure that is not in the reference. However, as explained above, the paint limitation combined with the insert-molded limitation is a distinguishable structural limitation over the structure disclosed by Kasugai et al.

Pachciarz et al. does not disclose or suggest the required coating on the Examiner asserted first part and second part (fuel tank 12 and base ring 22, respectively).

Prince fails to disclose or suggest the required paint made of the same materials as the first part, the second part insert molded in the first part, and the coating comprising the thermoplastic

material, as required by claim 1. According to Prince, a bond between the tube 8 and the cone 1 is formed by means of local heating, not by insert-molding. Thus, there is no assurance that gap-free adhesion is achieved to provide gas and liquid-tightness.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. *Helifix Ltd. v. Blok-Lok Ltd.*, 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Kasugai et al. and Pachciarz et al. do not disclose that the second part is coated with a paint made of the same material as the first part, and Prince does not disclose the required paint made of the same materials as the first part, the second part insert molded in the first part, and the coating comprising the thermoplastic material, as required by claim 1, Kasugai et al., Pachciarz et al., and Prince do not anticipate claim 1.

Applicant further submits that Kasugai et al., Pachciarz et al., and Prince do not suggest the claimed insert mold structure.

New claims 20-25 are allowable for at least the same reasons discussed above.

The dependent claims are allowable for at least the same reasons as the independent claims from which they depend, and further distinguish the claimed invention, for example claims 3 and 23 further require that the coating and second part are heat-treated. Claims 4 and 24 require that the first part is made of a resin and the second part is made of a metal. Claims 10 and 25 further require

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that the melting point of the coating is lower than the melting point of the second part. The prior art does not suggest the claimed insert mold structure with these additional limitations.

In view of the above remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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has been drawn from the following references: R. E. Huschke, *Glossary of Basic Terms*, AFM 11-1, vol. 1, 1959; U.S. Air Force *Glossary of Standardized Terms*, AFM 11-1, vol. 1, 1959; U.S. Air Force *Glossary of Standardized Terms*, AFM 11-1, vol. 3, 1970; W. H. Allen, *Aerospace Terminology*, AFM 11-1, vol. 3, 1970; W. H. Allen, *Aerospace Use*, 1st ed., National Aeronautics and Space Administration, 1967; *A Glossary of Terms and Abbreviations*, Royal Aircraft Establishment, 1967; *Glossary of Air Traffic Control Terms*, Federal Aviation Agency, 1967; *Standards Missile Range*, New Mexico, National Bureau of Standards, AD 677 001.

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# DICTIONARY OF SCIENTIFIC AND TECHNICAL TERMS

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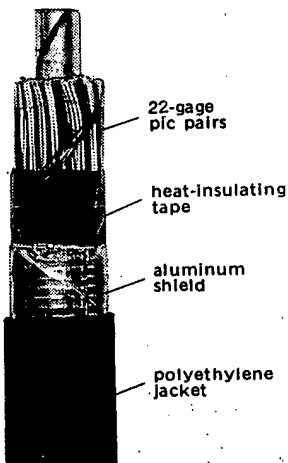
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## COATI

Common coati (*Nasua nasua*).

## COAXIAL CABLE



Cutaway view of coaxial transmission line.

direction of travel of a radio wave when it crosses a shoreline obliquely. Also known as land effect. { 'kōs-təl ri'frak-shən }  
**coastal sediment** [GEOL.] The mineral and organic deposits of deltas, lagoons, and bays, barrier islands and beaches, and the surf zone. { 'kōs-təl 'sed-ə-mənt }

**coast chart** [NAV.] A nautical chart for use in inshore, coastwise navigation when a course carries a vessel inside outlying reefs and shoals, for use in entering or leaving bays and harbors of considerable size, or for use in navigating larger inland waterways. { 'kōst, 'chärt }

**coaster** [NAV. ARCH.] A small merchant ship, about 200 feet (61 meters) long, which operates near coasts, in rivers and estuaries, and on short ocean passages. { 'kō-stər }

**coast guard** [ORD.] A naval force which guards a coast and ensures the order, safety, and effective operation of traffic on the coastal waters. { 'kōst, 'gärd }

**coast guard cutter** [NAV. ARCH.] A small, armed boat in a coast guard. { 'kōst, 'gärd, 'kōd-ər }

**Coast Guard lines** [NAV.] Lines established by the U.S. Coast Guard for separating areas of the sea where the inland rules of the road apply, from those areas where the international rules apply. { 'kōst, 'gärd, 'līnz }

**Coast Guard station** [NAV.] In American usage, any building on the coast used to house personnel and equipment for saving life at sea. Also known as life-saving station. { 'kōst, 'gärd, 'stā-shən }

**coast ice** See fast ice. { 'kōst, 'īs }

**coasting** [NAV.] Proceeding approximately parallel to a coastline and near enough to be in pilot waters most of the time. { 'kō-stīŋ }

**coasting flight** [AERO. ENG.] The flight of a rocket between burnout or thrust cutoff of one stage and ignition of another, or between burnout and summit altitude or maximum horizontal range. { 'kō-stīŋ, 'flīt }

**coastline** [GEOGR.] 1. The line that forms the boundary between the shore and the coast. 2. The line that forms the boundary between the water and the land. { 'kōst, 'līn }

**coastlining** [MAP.] The process of obtaining data from which the coastline can be drawn on a chart. { 'kōst, 'līn-īŋ }

**coast pilot** [NAV.] A book serving as an adjunct to nautical charts, containing important information which cannot be shown conveniently on the charts, and not readily available elsewhere; prepared by the U.S. Coast and Geodetic Survey for coastal waters of continental United States, Hawaii, the Virgin Islands, and Puerto Rico; and by the U.S. Naval Oceanographic Office for foreign waters. Also known as sailing directions. { 'kōst, 'pī-lət }

**coast piloting** [NAV.] The directing of the movements of a vessel near a coast by means of terrestrial reference points. { 'kōst, 'pī-ləd-īŋ }

**coast shelf** See submerged coastal plain. { 'kōst, 'shelf }

**coastwise navigation** [NAV.] Navigation in the vicinity of a coast, in contrast to offshore navigation at a distance from a coast. { 'kōst, 'wīz, 'nav-ə'gā-shən }

**coated abrasive** [MATER.] An abrasive product having the abrasive particles attached to a backing material with glue or a synthetic resin. { 'kōd-əd ə'brā-siv }

**coated cathode** [ELECTR.] A cathode that has been coated with compounds to increase electron emission. { 'kōd-əd 'kāth-əd }

**coated electrode** [MET.] A wire covered with metal oxides and silicates and used as a filler-metal electrode in arc welding. Also known as covered electrode. { 'kōd-əd i'lek-trōd }

**coated fabric** [TEXT.] A fabric that has been coated, covered, or impregnated with substances such as lacquer, varnish, rubber, or polymers. { 'kōd-əd 'fab-rīk }

**coated filament** [ELECTR.] A vacuum-tube filament coated with metal oxides to provide increased electron emission. { 'kōd-əd 'fil-ə-mənt }

**coated lens** [OPTICS.] A lens whose surfaces have been coated with a thin, transparent film having an index of refraction that minimizes light loss by reflection. { 'kōd-əd 'lens }

**coated paper** [MATER.] Paper with a surface coating of clay and other materials to produce a smooth, shiny surface; especially useful for fine, detailed, blur-free reproductions in color or black and white. Also known as enamel paper. { 'kōd-əd 'pā-pər }

**coated pit** [CYTOL.] A cell surface depression that is coated

with clathrin on its cytoplasmic surface and functions in receptor-mediated endocytosis. { 'kōd-əd 'pīt }

**coat hanger die** [ENG.] A plastics-sheet slot die shaped like a coat hanger on the inside. { 'kōt, 'hæŋ-ər, 'dī }

**coati** [VERT. ZOO.] The common name for three species of carnivorous mammals assigned to the raccoon family (Procyonidae) characterized by their elongated snout, body, and tail. { 'kə'wād-ē }

**coating** [MATER.] 1. Any material that will form a continuous film over a surface. 2. The film formed by the material. { 'kōd-īŋ }

**coating density ratio** [MET.] In thermal spraying, the ratio of actual density to theoretical density of the coating material used. { 'kōd-īŋ, 'den-səd-ē, 'rā-shō }

**coax** See coaxial cable. { 'kō, 'aks }

**coaxial** [MECH.] Sharing the same axes. [MECH. ENG.] Mounted on independent concentric shafts. { 'kō'aks-ē-əl }

**coaxial antenna** [ELECTROMAG.] An antenna consisting of a quarter-wave extension of the inner conductor of a coaxial line and a radiating sleeve that is in effect formed by folding back the outer conductor of the coaxial line for a length of approximately a quarter wavelength. { 'kō'aks-ē-əl ən'ten-ə }

**coaxial attenuator** [ELECTROMAG.] An attenuator that has a coaxial construction and terminations suitable for use with coaxial cable. { 'kō'aks-ē-əl ə'ten-yə, 'wād-ər }

**coaxial bolometer** [ELECTR.] A bolometer in which the desired square-law detection characteristic is provided by a fine Wollaston wire element that has been thoroughly cleaned before being axially located and soldered in position in its cylinder. { 'kō'aks-ē-əl bə'lām-əd-ər }

**coaxial cable** [ELECTROMAG.] A transmission line in which one conductor is centered inside and insulated from an outer metal tube that serves as the second conductor. Also known as coax; coaxial line; coaxial transmission line; concentric cable; concentric line; concentric transmission line. { 'kō'aks-ē-əl 'kā-bəl }

**coaxial capacitor** See cylindrical capacitor. { 'kō'aks-ē-əl 'kə'pas-əd-ər }

**coaxial cavity** [ELECTROMAG.] A cylindrical resonating cavity having a central conductor in contact with its pistons or other reflecting devices. { 'kō'aks-ē-əl 'kav-əd-ē }

**coaxial cavity magnetron** [ELECTR.] A magnetron which achieves mode separation, high efficiency, stability, and ease of mechanical tuning by coupling a coaxial high Q cavity to a normal set of quarter-wavelength vane cavities. { 'kō'aks-ē-əl, 'kav-əd-ē 'mag-nə, 'trän }

**coaxial circles** [MATH.] Family of circles such that any pair have the same radical axis. { 'kō'aks-ē-əl 'sər-kəl-z }

**coaxial connector** [ELECTROMAG.] An electric connector between a coaxial cable and an equipment circuit, so constructed as to maintain the conductor configuration, through the separable connection, and the characteristic impedance of the coaxial cable. { 'kō'aks-ē-əl 'kə'nek-tər }

**coaxial-cylinder magnetron** [ELECTR.] A magnetron in which the cathode and anode consist of coaxial cylinders. { 'kō'aks-ē-əl, 'sil-ən-dər 'mag-nə, 'trän }

**coaxial cylinders** [MATH.] Two cylinders whose cylindrical surfaces consist of the lines that pass through concentric circles in a given plane and are perpendicular to this plane. { 'kō'aks-ē-əl 'sil-ən-dərz }

**coaxial diode** [ELECTR.] A diode having the same outer diameter and terminations as a coaxial cable, or otherwise designed to be inserted in a coaxial cable. { 'kō'aks-ē-əl 'dī, 'ōd }

**coaxial filter** [ELECTROMAG.] A section of coaxial line having reentrant elements that provide the inductance and capacitance of a filter section. { 'kō'aks-ē-əl 'fīl-tər }

**coaxial hybrid** [ELECTROMAG.] A hybrid junction of coaxial transmission lines. { 'kō'aks-ē-əl 'hī, 'brəd }

**coaxial isolator** [ELECTROMAG.] An isolator used in a coaxial cable to provide a higher loss for energy flow in one direction than in the opposite direction; all types use a permanent magnetic field in combination with ferrite and dielectric materials. { 'kō'aks-ē-əl 'ī-sə, 'lād-ər }

**coaxial line** See coaxial cable. { 'kō'aks-ē-əl 'līn }

**coaxial-line resonator** [ELECTROMAG.] A resonator consisting of a length of coaxial line short-circuited at one or both ends. { 'kō'aks-ē-əl, 'līn 'rez-ən, 'ād-ər }

**coaxially fed linear array** [ELECTROMAG.] A beacon antenna